

BEFORE THE  
POLLUTION CONTROL HEARINGS BOARD  
STATE OF WASHINGTON

UNIVERSITY MECHANICAL CONTRACTORS, )  
INC., a Washington Corporation; )  
ADVANCED COMBUSTION SYSTEMS, )  
an Oregon Corporation; and ALSID, )  
SNOWDEN & ASSOCIATES, INC., )  
d/b/a AMERICAN SERVICES ASSOCIATES, )  
a Washington Corporation, )

Appellants, )

v. )

PUGET SOUND AIR POLLUTION )  
CONTROL AGENCY, )

Respondent. )

PCHB NO. 87-56

FINAL FINDINGS OF FACT,  
CONCLUSIONS OF LAW  
AND ORDER

On March 13, 1987, Advanced Combustion Systems, University Mechanical Contractors, Inc., and Alsld, Snowden & Associates, Inc., d/b/a American Services Association, filed a Notice of Appeal with the Pollution Control Hearings Board, challenging the Puget Sound Air Pollution Control Agency's ("PSAPCA") Final Order to Prevent Construction, (Notice of Construction No. 2793) dated February 19, 1987), of an incinerator with heat recovery unit at the U.S. Veterans Administration Hospital at 4435 Beacon Avenue South in Seattle,

1 Washington. Appellants simultaneously filed a Motion and Memorandum  
2 in Support of an Early Hearing Date. The motion was not opposed and  
3 an early hearing date was scheduled.

4 On April 1, 1987, PSAPCA filed a Motion for Summary Judgment and  
5 supporting Memorandum and Affidavits, to which appellants filed a  
6 response on April 10, 1987. Argument was heard and the motion was  
7 denied on April 20, 1987.

8 On April 3, 1987, appellants filed a Motion for Interim Relief,  
9 requesting that at the conclusion of the hearing PSAPCA be directed to  
10 authorize the operation of the incinerator, pending the Board's final  
11 order in this appeal. PSAPCA opposed the motion, filing its response  
12 on April 20, 1987. Argument was heard and the motion was denied on  
13 that date.

14 On April 3, 1987, appellants also moved to strike the legal issue  
15 regarding Best Available Control Technology ("BACT"). Argument was  
16 heard and the motion was also denied.

17 The formal hearing on the merits was held on April 3, 1987 and  
18 continued to April 20, 1987. Present for the Board were Members  
19 Judith A. Bendor (Presiding), Lawrence J. Faulk (Chair), and Wick  
20 Dufford, Member. Appellants were represented by Attorney Charles K.  
21 Douthwaite. Respondent was represented by Attorney Keith D.  
22 McGoffin. Court reporters with Gene Barker & Associates recorded the  
23 proceedings.

At the hearing witnesses were sworn and testified. Exhibits were admitted and examined. Argument was heard. Parties subsequently filed Proposed Findings, Conclusions and Order. From the testimony, exhibits, filings, and arguments of the parties, the Board makes these

#### FINDINGS OF FACT

##### I

The Puget Sound Air Pollution Control Agency ("PSAPCA") is an activated air pollution control authority under the terms of the State of Washington Clean Air Act, empowered to monitor and enforce emission standards for air pollutants, and to review and approve new sources of air pollution. PSAPCA has filed with the Board certified copies of its Regulation I and II, of which the Board takes official notice.

##### II

University Mechanical Contractors, Inc., ("University") is a Washington corporation. Advanced Combustion Systems ("Advanced") is an Oregon corporation with its principal place of business in Bellingham, Washington. Alsid, Snowden & Associates, Inc., d/b/a American Services Associates ("American") is a Washington corporation. The Veterans Administration ("VA") is not a party to this appeal.

##### III

The VA contracted with University to have an incinerator installed in its hospital in Seattle, Washington. University in turn subcontracted with Advanced to manufacture the unit and participate in installing it. American was hired to perform emission source tests on

1 the incinerator. The incinerator is a heat recovery system designed  
2 to burn hospital wastes.

3 IV

4 In October 1983, United Industries Corporation ("United") wrote a  
5 two-page letter to PSAPCA, informing the authority it was serving as a  
6 consultant to the VA in the design and preparation of specifications  
7 for an incinerator with waste heat recovery for the VA hospital. The  
8 letter generally outlined certain proposed features of the  
9 incinerator, including a 1,200 pound per hour charge rate, and asked  
10 PSAPCA about emissions limitations, required control technology, and  
11 possible emission offsets available.

12 James Pearson for PSAPCA responded, (letter dated October 27,  
13 1983), stating in pertinent part that:

- 14 1. [Particulate] [E]mission limits for the  
15 proposed system are 0.05 grains particulate  
16 matter per dry standard cubic foot, corrected  
to 12% CO<sub>2</sub> (exclusive of CO<sub>2</sub> from  
auxiliary fuel).
- 17 2. The proposed system must incorporate "best  
18 known available and reasonable methods of  
19 emission control" (BACT); reference Section  
6.07(b)(2) of Regulation I. . . .

20 The letter also provided some information regarding emissions  
21 offsets.

22 V

23 The incinerator design was completed in January 1984. Bids for  
24 construction were solicited on November 15, 1984.

VI

On February 22, 1985, United wrote PSAPCA a one-page letter, informing the agency it was assisting the VA in preparing bid specifications for "a new incinerator system," and that two potential systems were being considered: a heat recovery incinerator, and one with no means of heat recovery. Both systems were identified by United to have a maximum charge rate of 1,200 pounds per hour. United asked PSAPCA, among other matters, what particulate emissions standards would apply, and whether Best Available Control Technology would be required.

Harry L. Watters for PSAPCA (by letter dated March 1, 1985), answered in relevant part:

1. What particulate matter emission standards would apply?

The standard for the incinerator with heat recovery is a properly sized and designed baghouse control or equivalent. To demonstrate equivalency, the control system should be capable of meeting 0.02 grains per standard dry cubic foot (gr/dscf) calculated to 12 percent carbon dioxide (exclusive of carbon dioxide from auxiliary fuel). This includes the back half of the Method 5 source test train.

[ . . . ]

2. Would Best Available Control Technology (BACT) be required, and, if so, what would constitute BACT?

Yes. BACT for particulate matter (see response to no. 1 above) is more stringent than that required by Section 9.09 of Regulation I. Section 6.07(b)(2) requires that a new installation incorporate "best known and reasonable methods of emission control." This term is defined in Section 1.07(h) of Regulation I. A similar requirement is mandated by RCW 70.94.152. A copy of Regulation I is enclosed.

VII

The construction contract was awarded on May 9, 1985, and the winning bidders were give notice to proceed on June 4, 1985.

VIII

On March 14, 1986, E. L Loveland of the VA wrote PSAPCA for confirmation of an oral communication that the particulate matter emission standards stated in Pearson's letter of October 27, 1983 would apply. On March 26, 1986, in response, PSAPCA (by Harry L. Watters) wrote Loveland stating that the October 27, 1983, PSAPCA letter should be followed, rather than the March 1, 1985, one.

IX

On May 9, 1986, in response to a request, PSAPCA's Watters sent the VA forms for filing a Notice of Construction. The accompanying letter stated, in part, the following:

As noted in Mr. James Pearson's letter, dated October 27, 1983:

"Emission limits for the proposed system are 0.05 grains particulate matter per dry standard cubic foot, corrected to 12 percent CO<sub>2</sub> (exclusive of CO<sub>2</sub> from auxiliary fuel). This includes the impinger catch of the Method 5 sampling train." This was determined to be best available control technology (BACT) for this unit. Based on Agency experience, it is difficult for incinerators to achieve this level of particulate control without control equipment. Also enclosed is a copy of Regulation I. If you have any questions, please call me [ . . . ].

X

A Notice of Construction (Application No. 2793) was submitted to PSAPCA on July 9, 1986. On forms accompanying the application, the

1 equipment was identified as an incinerator with heat recovery boiler,  
2 emergency dump stack, and with capacity of and waste quantity to be  
3 burned - 900 pounds per hour.

4 An unsigned environmental checklist was concurrently submitted,  
5 which showed the VA as the project proponent, listed 800 pounds as the  
6 amount the incinerator would be able to handle, and recited that  
7 emissions would be less than existing.

8 XI

9 PSAPCA, by letter dated July 17, 1986, requested specific  
10 information to supplement the Notice of Construction, including a copy  
11 of the Architects and Engineers' designs and specifications, an  
12 operation and maintenance manual, information on the use of the  
13 emergency dump stack, source test data, and a chronology regarding bid  
14 solicitation and award. The letter concluded that the incinerator  
15 "was installed without approval."

16 At the hearing, appellants did concede that the incinerator was  
17 built and installation begun before the Notice of Construction was  
18 filed.

19 The VA replied on July 30, 1987, providing some of the  
20 information. The letter advised that the construction contractor had  
21 contractual responsibility to obtain necessary permits and licenses,  
22 and to furnish a system meeting all specifications; and that the  
23 architect/engineer had contractual responsibility to meet Federal,  
24 State and local standards and regulations. Title to the incinerator  
25  
26

1 was to pass only upon the Government's acceptance. At the time of the  
2 hearing, title had not passed to the VA.

3 XII

4 On August 6, 1986 PSAPCA issued an "Order to Prevent Construction  
5 Notice of Construction No. 2793. In that Order, PSAPCA stated that  
6 the proposed incinerator had not been demonstrated to be capable of  
7 "consistently meeting" the particulate emission standard of Regulation  
8 I, at Section 9.09(a)(2). The Agency concluded that three reports of  
9 previous source tests of a purportedly similar incinerator at Fort  
10 Lewis had failed to show compliance with the 0.05 grains standard.  
11 The agency also provided an analysis which concluded that two source  
12 tests provided by applicant from another incinerator were not  
13 acceptable.

4 XIII

15 Appellants petitioned for reconsideration and requested permission  
16 to conduct source testing in accordance with Agency procedure on the  
17 incinerator in question. On August 27, 1986, PSAPCA granted approval  
18 to conduct a source test, and required a source test plan to be  
19 submitted two weeks before the test. The plan was submitted to  
20 PSAPCA.

21 After a preliminary test, a source test was conducted on December  
22 19, 1986 by Wesley Snowden, a licensed engineer and principal with  
23 American, and his assistants. Waste was loaded at 7:40 a.m. and  
24 burning began. Three "runs" of the test were conducted, with the  
25  
26

1 first emission sampling done at 8:17 a.m., and final sampling done at  
2 1:18 p.m. Emissions were measured only from the exhaust stack from  
3 the heat exchange boiler. The so-called "dump" stack was not directly  
4 measured for particulates. PSAPCA's air pollution source analyst was  
5 present during various times of the test.

6 VA personnel participated in the loading process, but appellants  
7 conceded that VA personnel had not been trained, as of that date, to  
8 operate the incinerator. To some extent, Advanced's project engineer,  
9 K. Edward Dahl, assisted in loading the incinerator, an operation  
10 involving placement of a cart full of refuse in position next to the  
11 incinerator and pressing three buttons in sequence. Except for  
12 loading procedures the incinerator operated under the direction of its  
13 built-in automatic controls during the source test; neither Mr. Dahl,  
14 Mr. Snowden, nor their assistants made adjustments to the incinerator  
15 itself during the test.

#### 16 XIV

17 American compiled the data collected during the source test and  
18 produced a report showing that the incinerator emitted particulates at  
19 an average rate of 0.042 grains per dry standard cubic foot during the  
20 test. The source test report was received by PSAPCA from the VA On  
21 January 15, 1987.

#### 22 XV

23 PSAPCA informed the VA and University (by letter dated January 26,  
24 1987, enclosing memos analyzing the test), that the test did not  
25  
26

1 demonstrate compliance with Agency requirements.

2 On February 19, 1987, PSAPCA, pursuant to 6.07(c) of Regulation I,  
3 issued its Final Order to Prevent Construction, stating that it had  
4 not been demonstrated that the proposed incinerator was capable of  
5 "consistently meeting the standard in Section 9.09(a)(2) of Regulation  
6 I." PSAPCA stated it based this conclusion on its letters of August  
7 6, 1986 and January 26, 1987, and accompanying memos.

8 From this Order, the parties filed their appeals on March 13,  
9 1987.

10 XVI

11 PSAPCA's objections to the December 19, 1986, source test were, in  
12 part, based on the perception that the incinerator was being operated  
13 and adjusted by Mr. Dahl whose sophistication in such matters exceeds  
14 that to be expected of VA hospital personnel and, therefore, the test  
15 did not present truly representative operating conditions. The  
16 testimony convinced us that Mr. Dahl's involvement had no demonstrable  
17 effect on the test results.

18 PSAPCA was also concerned about the absence of a damper on the  
19 "dump" stack. Without a damper, the agency thought, the "dump" stack  
20 emissions should have been measured. Expert testimony persuaded us  
21 that the omission of a "dump" stack damper is an appropriate design  
22 feature of this particular incinerator for safety reasons. Further,  
23 we find that the lack of such a damper had no effect on emissions  
24  
25  
26

1 during the test, that all gas was pulled through the heat exchange  
2 boiler, and that the measurement of the exhaust stack only was  
3 appropriate.

4 PSAPCA additionally asserted that several operational aspects of  
5 the testing procedure were deficient on a technical basis. We were  
6 convinced that any technical problems with the test did not bias the  
7 results.

8 In sum, we find that the test results achieved were fairly  
9 representative of the unit's operation and that the source test  
10 conducted on December 1986, was valid for the purposes of determining  
11 the ability of the incinerator to comply with PSAPCA's emission  
12 standard for particulate matter.

13 XVII

14 Appellants' experts admitted that better results -- perhaps .02 or  
15 .03 grams -- could be achieved if a baghouse were added to the  
16 incinerator installation.

17 Baghouses are a known and available means of emission control.  
18 The incinerator at another large hospital in Seattle -- Swedish  
19 Hospital -- is operating with an installed baghouse.

20 XVIII

21 A rough estimate is that the addition of a baghouse to the VA  
22 incinerator would add \$80,000 to \$100,000 to the cost of the  
23 installation and double or triple the maintenance costs. However, no  
24  
25  
26

1 rigorous cost analysis of these matters was presented; nor was  
2 information on costs experienced elsewhere presented for incinerators  
3 performing similar functions.

4 XIX

5 Any Conclusion of Law hereinafter determined to be a Finding of  
6 Fact is hereby adopted as such.

7 From these Facts, the Board comes to these.

8 CONCLUSIONS OF LAW

9 I

10 The Board has jurisdiction over these parties and these issues.  
11 Ch. 43.21B RCW. Appellants have the burden of proof in this case.

12 II

13 The Washington Clean Air Act authorizes the Notice of Construction  
14 process: RCW 70.90.152. By this section, the Legislature has, in  
15 effect, provided for a building permit requirement for new air  
16 contaminant sources.

17  
18 The standard for approval under RCW 70.94.152 is whether the  
19 proposed air contaminant source

20 will be accord with applicable rules and  
21 regulations in force pursuant to this chapter and  
22 will provide all known available and reasonable  
23 methods of emission control.

1 Thus, approval of a new source is subject both to demonstrated  
2 compliance with numerical emission standards established by regulation  
3 and to a requirement for installing advanced technology.

4 The level of performance needed to meet the emission standards  
5 part of this dual requirement may not be sufficient to meet the  
6 technology standard. Satisfying the latter may necessitate doing  
7 better than simply meeting the applicable numerical emission  
8 standard. See, Weyerhaeuser v. Southwest Air Pollution Control  
9 Authority, 91 Wn.2d 77, 82, 586 P.2d 1163 (1978).

### 10 III

11 PSAPCA has modeled its regulations on the enabling statute.  
12 PSAPCA Regulation I at Section 6.03(b) states, in pertinent part,  
13 that:

14 "no person shall construct, install or establish a new  
15 air contaminant source [ . . . ] unless a 'Notice of  
16 Construction and Application for Approval' [ . . . ]  
17 has been filed and approved by the Agency in  
18 accordance with Sections 6.07(a) or 6.11 [ . . . ].

19 Regulation I at Section 6.07 states in pertinent part:

20 (b) No approval [to operate] will be issued unless .

21 (1) The source is designed and will be installed  
22 to operate without causing a violation of the  
23 emission standards.

24 (2) The source incorporates best available  
25 control technology and will meet the requirements  
26 of all applicable Standards of Performance  
promulgated by the United States Environmental  
Protection Agency. [emphasis added]

1 IV

2 The emission standards for this incinerator are to be found  
3 at Regulation I, Section 9.09, which states in pertinent part:

4 It shall be unlawful for any person to cause or  
5 allow the emission of particulate matter if  
6 [ . . . ] the particulate matter discharged into  
7 the atmosphere from any single source exceeds the  
8 following weights at the point of discharge:

9 [ . . . ]  
(a)(2)

10 After March 1, 1986, in refuse burning equipment  
11 having heat recovery equipment, 0.05 grains for  
12 each standard cubic foot of exhaust gas, adjusted  
13 or calculated to 12% carbon dioxide.

14 V

15 We conclude, on the basis of the valid source test of December 19,  
16 1986, that the incinerator in question has been demonstrated to be  
17 capable of operating in accord with applicable emission standards and  
18 hold that the denial of the Notice of Construction for failure to make  
19 such demonstration was an error.

20 VI

21 However, we conclude that compliance with the applicable  
22 technology standard has not been demonstrated, and therefore, decide  
23 that PSAPCA's denial of the Notice of Construction must be upheld.

24 VII

25 The technology standard is defined by PSAPCA Regulation I at  
26 Section 1.07 (h) under the rubric "Best Available Control Technology  
(BACT)". PSAPCA's definition substantially tracks the definition of

BACT provided in the State's regulations at WAC 173-403-030(g).

The WAC definition, however, expressly adds:

The requirement of RCW 70.94.152 that a new source will provide "all known available and reasonable methods of emission control" is interpreted to mean the same as best available control technology.

We conclude that the technology requirement of RCW 70.94.152 and BACT mean the same thing in the context of this case.

## VIII

The technology that is required is one that is "known", and "available", as opposed to newly developed by the applicant. Weyerhaeuser, supra, at 81-82. It also has to be "reasonable"; i.e., economically and technologically feasible Id. The mere fact that a system might cost more to install and operate does not mean under the law that it is not economically feasible. Id., at 85.

We conclude that the incinerator in question does not incorporate BACT. Particulate emissions can be further lowered by use of a baghouse - a known and available method. No evidence was presented that use of a baghouse is technologically infeasible. Appellant's rough estimate of increased cost is insufficient by itself to prove that the incinerator is not economically feasible.

## IX

Appellants appear to be contending (hence the lengthy chronology) that PSAPCA has misled them such that the Agency should be estopped

FINAL FINDINGS OF FACT  
CONCLUSIONS OF LAW AND ORDER  
PCRB NO. 87-56

1 from requiring BACT. It is evident that PSAPCA's communications have  
2 not been a model of clarity.

3 But it cannot be disputed that appellants filed the Notice of  
4 Construction application after design and bidding were complete and  
5 after construction and installation began. They did not wait for an  
6 approval before proceeding.

7 Estoppel, as an equitable principal, can only be raised by parties  
8 with "clean hands," and appellants have not demonstrated such hygienic  
9 attainment.

10 Additionally, estoppel does not apply if to do so would authorize  
11 an unlawful act. See, J & B Development Co. v. King County, 29 Wn.App  
12 942, 631 P.2d 1002 (1961). In this instance, BACT is required by law  
13 and regardless of somewhat murky preliminary communication as to what  
would constitute BACT in this case, appellants did not obtain a  
15 definitive determination of the matter through the statutory procedure  
16 prior to going forward with their project.

17 We conclude that applying estoppel against PSAPCA would frustrate  
18 the purpose of the laws and thwart public policy. See, Finch v.  
19 Matthews, 74 Wn.2d 161, 169-170, 443 P.2d 833 (1968). Allowing a new  
20 source of pollution to add emissions over what is known, available and  
21 feasible to attain, would impermissibly burden a public which has  
22 little choice over the air it breathes. To do so would frustrate the  
23 purpose of the Clean Air Act and Regulation I to achieve clean air.

1 X

2 Appellants' attempted to eliminate the BACT issue, claiming lack  
3 of notice. We conclude that notice was adequate. BACT was raised by  
4 PSAPCA by motion filed two days in advance of the first day of  
5 hearing. However, the hearing was held on two separate days, thirteen  
6 days apart, providing appellants with ample opportunity to respond; an  
7 opportunity they took advantage of. Appellants have not demonstrated  
8 prejudice or undue surprise.

9 City of Marysville v. PSAPCA, 104 Wn.2d 115, 702 P.2d 469 (1985),  
10 cited by appellants, is not persuasive authority for their motion to  
11 strike BACT as an issue. As that case recites: "'[T]he most  
12 important fact about pleadings in the administrative process is their  
13 unimportance.'" Id., at 119. Pleadings in an administrative  
14 proceeding serve a notice function. But proof may depart from  
15 pleadings and the pleadings may be deemed amended if there is no undue  
16 surprise or prejudice. Id. Here PSAPCA, in effect, asserted BACT as  
17 an alternate basis for its denial of the Notice of Construction  
18 application at a time and under circumstances which permitted the  
19 issue to be litigated in these proceedings.

20 The Marysville case reversed a decision which was based upon  
21 finding the violation of different standard from the one under which  
22 the case was tried. Such is not the situation here.

23 XI

24 Any Finding of Fact which is deemed a Conclusion of law is hereby  
25 adopted as such.

26  
27 FINAL FINDINGS OF FACT  
CONCLUSIONS OF LAW AND ORDER  
PCHB NO. 87-56

(17)

From these Conclusions, the Board enters this:

ORDER

THEREFORE, the Order to Prevent Construction is AFFIRMED

DONE this 24<sup>th</sup> day of August, 1987.

POLLUTION CONTROL HEARINGS BOARD

[See separate opinion]

JUDITH A. BENDOR, Presiding

Wick Dufford

WICK DUFFORD, Chairman

Lawrence V. Faulk 8/24/87

LAWRENCE V. FAULK, Member

2 Bendor - Concurring in Part and Dissenting in Part:

3 I agree that the Order to Prevent Construction should be affirmed  
4 on the basis of the failure to demonstrate compliance with BACT. I  
5 respectfully dissent only from that portion of the majority opinion  
6 which holds that the December 1986 test demonstrated compliance with  
7 the particulate emissions standards. (Conclusion of Law V).

8 I

9 The incinerator was tested at a 720 pound per hour loading rate,  
10 despite its being characterized in the Notice of Construction, and  
11 Appellants' Test Plan submitted to PSAPCA, as a 900 pound per hour  
12 system.

13 II

14 Particulate emission concentrations from the three test runs were  
15 calculated by American to be:

16 First Run: .034 grains/dry stand cubic foot of exhaust as  
17 corrected to 12% carbon dioxide (CO<sub>2</sub>) less the  
18 CO<sub>2</sub> contribution from the auxiliary fuel.  
19 [hereafter: "gr/dscf"]

20 Second Run: .039 gr/dscf

21 Third Run: .054 gr/dscf

22 III

23 During Run 1 the nozzle-size was changed.  
24  
25  
26  
27

1 IV

2 Throughout the test American systematically failed to sample for  
3 particulate emissions during the waste loading cycle. No evidence was  
4 presented that burning or release of emissions ceased during loading  
5 or that this failure to sample was a good engineering practice.

6 V

7 PSAPCA's Regulation I at Section 11.01 states (in part):

8 All definitions and sampling procedures shall conform to  
9 current Environmental Protection Agency ["EPA"]  
10 requirements where applicable and available, otherwise by  
11 using procedures and definitions adopted by the Board after  
12 public hearing.

13 In this case EPA's test sampling method applied, e.g. 40 CFR Pt. 60.  
14 Method 5 of Pt. 60, Section 4.12 states in pertinent part:

15 Select a nozzle size [ . . . ] such that it is not  
16 necessary to change the nozzle size in order to maintain  
17 isokinetic sampling rates. During the run, do not change  
18 the nozzle size.

19 VI

20 Applicable regulations at 40 CFR Pt. 60.8(f), further state (in  
21 part) that:

22 (f) Unless otherwise specified in the applicable  
23 subpart, each performance test shall consist of three  
24 separate runs using the applicable test method. Each run  
25 shall be conducted for the time and under the conditions  
26 specified in the applicable standard. For the purpose of  
27 determining compliance with an applicable standards, the  
arithmetic means of results of the three runs shall  
apply. In the event that a sample is accidentally lost

1 or conditions occur in which one of the three runs must  
2 be discontinued because of forced shutdown, failure of an  
3 irreplaceable portion of the sample train, extreme  
4 meteorological conditions, or other circumstances, beyond  
5 the owner or operator's control, compliance may, upon the  
6 Administrator's approval, be determined using the  
7 arithmetic mean of the results of the two other runs.  
8 [emphasis added].

9 40 CFR Pt. 60.2 defines a "run" to be the:

10 [ . . . ] net period of time during which an emission  
11 sample is collected. Unless otherwise specified, it may  
12 be either intermittent or continuous within the limits of  
13 good engineering practice.

#### 14 VII

15 Changing the nozzle size during Run No. 1 invalidates that run.  
16 Appellants have not demonstrated that their efforts to compensate for the  
17 nozzle change constituted an "equivalent method", so as to satisfy  
18 required criteria. See, 40 CFR Pt. 60.2.

19 Since only two runs thereby remain, they are insufficient to meet  
20 the 50 CFR Pt. 60.8(f) "three separate run" requirement for a new  
21 source test. Furthermore, there is no evidence that any of the  
22 situations which would lawfully permit averaging the two remaining runs  
23 (e.g. forced shutdown, loss of sample train, etc.) were present. Nor  
24 was approval for averaging only two runs requested and received. To  
25 the contrary, PSAPCA has objected to averaging two runs.

#### 26 VIII

27 Appellants have failed to demonstrate that failing to sample during  
waste loading was a good engineering practice. Therefore, on that  
basis all three runs are invalid. See, 40 CFR Pt. 60.2.

IX

Emission tests are required to represent real operating conditions. Appellants failed to test at the 900 pound per hour loading rate, thereby failing to follow the proposed operating level in the Notice of Construction or their own Test Plan. The test therefore does not mirror proposed real operating conditions and is therefore invalid. Alternatively the test is at best only valid for a 720 pound level of operation, to the extent otherwise invalid.

X

For all the foregoing reasons, PSAPCA's denial of the Notice of Construction, as based on a determination that particulate emissions standards compliance had not been demonstrated, was correct.

In addition, the bypass stack was not sampled for emissions. The stack has no damper on it. Appellants did not prove that emissions could not be released through that stack, but rather that during the December 1986 no emissions were released. Therefore, if retesting is required, sampling that stack is merited.

Lastly, prior to such retesting, VA personnel should be trained to operate the incinerator so that the assistance of outside personnel is not required, so as to dispel related questions about approximating true operating conditions.

  
JUDITH A. BENDOR, Presiding